

Chapter 14 - Exterior Walls

2001 CBC	PROPOSED ADOPTION	OSHDP				DSA-SS	Comments
		1	2	3	4		
	Adopt entire chapter without amendments			X			
	Adopt entire chapter with amendments listed below	X	X		X	X	
	Adopt only those sections listed below						
	1403.2 CA	X	X		X	X	Editorial
	1405.1.1 CA	X	X		X	X	
1403A.4.1 and 1403A.4.4	1408.1 CA	X	X		X	X	Relocated existing California Building Standards into IBC format
1403A.5.3	1408.2 CA	X	X		X	X	Relocated existing California Building Standards into IBC format
1403A.5.6	1408.2.1 CA	X	X		X	X	Relocated existing California Building Standards into IBC format
1405A.1	1408.3 CA	X	X		X	X	Relocated existing California Building Standards into IBC format

REPEAL OF EXISTING CALIFORNIA AMENDMENTS IN PART OR IN WHOLE THAT ARE NO LONGER NECESSARY AS FOLLOWS:

~~2001 CBC SECTION 1401A — APPLICABILITY:~~ Repeal all amendments in this section.

~~2001 CBC SECTION 1403A — VENEER:~~ Repeal amendments in following subsections.

~~1403A.1.1, 1403A.1.2, 1403A.3 and 1403A.6 including all subsections.~~

~~2001 CBC SECTION 1404A — VINYL SIDING:~~ Repeal all amendments in this section.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 — 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

EXPRESS TERMS

SECTION 1401 - GENERAL

1401.1 Scope. The provisions of this chapter shall establish the minimum requirements for exterior walls; exterior wall coverings; exterior wall openings; exterior windows and doors; architectural trim; balconies and similar projections; and bay and oriel windows.

SECTION 1402 - DEFINITIONS

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SECTION 1403 - PERFORMANCE REQUIREMENTS

1403.1 General. The provisions of this section shall apply to exterior walls, wall coverings and components thereof.

1403.2 Weather protection. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1405.3. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1404.2, and a means for draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with the ~~International Energy Conservation Code~~ Section 150 of Title 24, Part 6.

Exception [For OSHPD 1, 2 & 4]: OSHPD regulated facilities are exempt from requirements of Title 24, Part 6.

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Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

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SECTION 1404 - MATERIALS

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SECTION 1405 - INSTALLATION OF WALL COVERINGS

1405.1 General. Exterior wall coverings shall be designed and constructed in accordance with the applicable provisions of this section.

1405.1.1 [For DSA-SS and OSHPD 1, 2 and 4] Additional requirements. *In addition to the requirements of 1405.5, 1405.6, 1405.7, 1405.8, and 1405.9, the installation of anchored or adhered veneer shall comply with applicable provisions of Section 1408.*

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

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1405.2 Weather protection.

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1405.3 Flashing.

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1405.4 Wood veneers.

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1405.5 Anchored masonry veneer. Anchored masonry veneer shall comply with the provisions of Sections 1405.5, 1405.6, 1405.7 and 1405.8 and Sections 6.1 and 6.2 of ACI 530/ASCE 5/TMS 402.

1405.5.1 Tolerances. Anchored masonry veneers in accordance with Chapter 14 are not required to meet the tolerances in Article 3.3 G1 of ACI 530.1/ASCE 6/TMS 602.

1405.5.2 Seismic requirements. Anchored masonry veneer located in Seismic Design Category C, E or F shall conform to the requirements of Section 6.2.2.10 of ACI 530/ ASCE5/ TMS 402. Anchored masonry veneer located in Seismic Design Category D shall conform to the requirements for Seismic Design Category E or F.

1405.6 Stone veneer. Stone veneer units not exceeding 10 inches (254 mm) in thickness shall be anchored directly to masonry, concrete or to stud construction by one of the following methods:

1. With concrete or masonry backing, anchor ties shall be not less than 0.1055-inch (2.68 mm) corrosion-resistant wire, or approved equal, formed beyond the base of the backing. The legs of the loops shall be not less than 6 inches (152 mm) in length bent at right angles and laid in the mortar joint, and spaced so that the eyes or loops are 12 inches (305 mm) maximum on center (o.c.) in both directions. There shall be provided not less than a 0.1055-inch (2.68 mm) corrosion-resistant wire tie, or approved equal, threaded through the exposed loops for every 2 square feet (0.2 m²) of stone veneer. This tie shall be a loop having legs not less than 15 inches (381 mm) in length bent so that it will lie in the stone veneer mortar joint. The last 2 inches (51 mm) of each wire leg shall have a right-angle bend. One-inch (25 mm) minimum thickness of cement grout shall be placed between the backing and the stone veneer.
2. With stud backing, a 2-inch by 2-inch (51 by 51 mm) 0.0625-inch (1.59 mm) corrosion-resistant wire mesh with two layers of water-resistive barrier in accordance with Section 1403.3 shall be applied directly to wood studs spaced a maximum of 16 inches (406 mm) o.c. On studs, the mesh shall be attached with 2-inch-long (51 mm) corrosion-resistant steel wire furring nails at 4 inches (102 mm) o.c. providing a minimum 1.125-inch (29 mm) penetration into each stud and with 8d common nails at 8 inches (203 mm) o.c. into top and bottom plates or with equivalent wire ties. There shall be not less than a 0.1055-inch (2.68 mm) corrosion-resistant wire, or approved equal, looped through the mesh for every 2 square feet (0.2 m²) of stone veneer. This tie shall be a loop having legs not less than 15 inches (381 mm) in length, so bent that it will lie in the stone veneer mortar joint. The last 2 inches (51 mm) of each wire leg shall have a right-angle bend. One-inch (25 mm) minimum thickness of cement grout shall be placed between the backing and the stone veneer.

1405.7 Slab-type veneer. Slab-type veneer units not exceeding 2 inches (51 mm) in thickness shall be anchored directly to masonry, concrete or stud construction. For veneer units of marble, travertine, granite or other stone units of slab form ties of corrosion-resistant dowels in drilled holes shall be located in the middle third of the edge of the units, spaced a maximum of 24 inches (610 mm) apart around the periphery of each unit with not less than four ties per veneer unit. Units shall not exceed 20 square feet (1.9 m²) in area. If the dowels are not tight fitting, the holes shall be drilled not more than 0.063 inch (1.6 mm) larger in diameter than the dowel, with the hole countersunk to a diameter and depth equal to twice the diameter of the dowel in order to provide a tight-fitting key of cement mortar at the dowel locations when the mortar in the joint has set. Veneer ties shall be corrosion-resistant metal capable of resisting, in tension or compression, a force equal to two times the weight of the attached veneer. If made of sheet metal, veneer ties shall be not smaller in area than 0.0336 by 1 inch (0.853 by 25 mm) or, if made of wire, not smaller in diameter than 0.1483-inch (3.76 mm) wire.

1405.8 Terra cotta. Anchored terra cotta or ceramic units not less than 1.625 inches (41 mm) thick shall be anchored directly to masonry, concrete or stud construction. Tied terra cotta or ceramic veneer units shall be not less than 1.625 inches (41 mm) thick with projecting dovetail webs on the back surface spaced approximately 8 inches (203 mm) o.c. The facing shall be tied to the backing wall with corrosion-resistant metal anchors of not less than No. 8 gage wire installed at the top of each piece in horizontal bed joints not less than 12 inches (305 mm) nor more than 18 inches (457 mm) o.c.; these anchors shall be secured to 0.25-inch (6.4 mm) corrosion-resistant pencil rods that pass through the vertical aligned loop anchors in the backing wall. The veneer ties shall have sufficient strength to support the full weight of the veneer in tension. The facing shall be set with not less than a 2-inch (51 mm) space from the backing wall and the space shall be filled solidly with portland cement grout and pea gravel. Immediately prior to setting, the backing wall and the facing shall be drenched with clean water and shall be distinctly damp when the grout is poured.

1405.9 Adhered masonry veneer. Adhered masonry veneer shall comply with the applicable requirements in Section 1405.9.1 and Sections 6.1 and 6.3 of ACI 530/ASCE 5/TMS 402.

1405.9.1 Interior adhered masonry veneers. Interior adhered masonry veneers shall have a maximum weight of 20 psf (0.958 kg/m²) and shall be installed in accordance with Section 1405.9. Where the interior adhered masonry veneer is supported by wood construction, the supporting members shall be designed to limit deflection to $\frac{1}{600}$ of the span of the supporting members.

1405.10 Metal veneers.

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1405.10.4 Grounding. Grounding of metal veneers on buildings shall comply with the requirements of Chapter 27 of this code or the ~~ICC~~ California *Electrical Code*.

1405.11 Glass veneer.

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1405.12 Exterior windows and doors.

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1405.13 Vinyl siding.

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1405.14 Cement plaster.

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1405.15 Fiber cement siding.

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1405.16 Fastening.

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1405.17 Fiber cement siding.

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Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

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SECTION 1406 - COMBUSTIBLE MATERIALS ON THE EXTERIOR SIDE OF EXTERIOR WALLS

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SECTION 1407 - METAL COMPOSITE MATERIALS (MCM)

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SECTION 1408 [FOR DSA-SS AND OSHPD 1, 2 AND 4] - ADDITIONAL REQUIREMENTS FOR ANCHORED AND ADHERED VENEER.

1408.1 (Relocated from 1403A.4.1, 2001 CBC) **General.** In no case shall veneer be considered as part of the backing in computing strength or deflection nor shall it be considered a part of the required thickness of the wall backing.

Veneer shall be anchored in a manner which will not allow relative movement between the veneer and the wall.

(Relocated from 1403A.4.4, 2001 CBC) Anchored or adhered veneer shall not be used on overhead horizontal surfaces.

1408.2 (Relocated from 1403A.5.3, 2001 CBC) **Adhered Veneer.** Units of tile, masonry, stone or terra cotta which exceed 5/8 inch (16 mm) in thickness shall be applied as for anchored veneer where used over exit ways or more than 20 feet (6096 mm) in height above adjacent ground elevation.

1408.2.1 (Relocated from 1403A.5.6, 2001 CBC) **Bond Strength and Tests.** Veneer shall develop a bond to the supporting element ~~backing of sufficient strength to provide a working shear stress of 50 psi (690 kPa).~~ in accordance with ACI 530, Section 6.3.2.4.

Not less than two shear tests shall be performed for the adhered veneer between the units and the supporting element. At least one shear test shall be performed at each building for each 5,000 square feet (465 m²) of floor area or fraction thereof.

~~The bond strength as determined by the tests shall have a minimum shear strength of 100 psi (690 kPa).~~

1408.3 (Relocated from 1405A.1, 2001 CBC) **Inspection.** All veneer shall be ~~continuously inspected during application by an inspector specially approved for that purpose by the enforcement agency.~~ inspected per Section 1704A.5.1.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

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